

* SWBAT define and apply acceleration

Sep 6-2:31 PM

Welcome!!!

SECA Physics
Wednesday 21 October 2015

* Pick up:

- slip of paper (for later)
- half sheet of paper

H. Leslie Grebe

Opening Question:

0 to 60 mph in 10 seconds

0 to 60 mph in 5 seconds

MINIVAN

FERARI



What's the difference? What does this tell you about the two cars?

ACCELERATION

Centering...

Sep 7-7:04 AM

Catchy Physics Phrases:

Speed is

$$\frac{\Delta d}{\Delta t}$$

CHANGE IN DISTANCE
DIVIDED BY CHANGE IN TIME

New Villain in Town:

<http://www.tes.co.uk/teaching-resource/Velocity-a-new-Villain-in-town-6192925/>

Velocity is

SPEED & DIRECTION

New idea:

Acceleration is

CHANGE IN VELOCITY DIVIDED BY
CHANGE IN TIME

$$a = \frac{\Delta v}{\Delta t}$$

Oct 10-7:34 AM

Washer demo

- Make a prediction
- Write a brief explanation

SPREAD OUT WASHERS

MADE AN EVEN SOUND ON PAN

LONGER OR FARTHER SOMETHING
FALLS, THE MORE DISTANCE
IT COVERS PER SECONDACCELERATION IS CHANGING
VELOCITY.EVEN
WASHERS
PREDICTION:OBSERVATION:
CLINKS SPED
UP. THE TIME
BETWEEN GOT
SHORTERSPACED OUT
WASHERS:

PREDICTION:

OBSERVATION:
CLINKS WERE
EVEN

Bill Nye...

Oct 5-7:33 AM

Catchy Physics Phrases: Speed, Velocity, Acceleration

Speed is

Change in distance over
change in time

Velocity is

Speed with direction

Acceleration is

Change in velocity over
change in time

$$a = \frac{\Delta v}{\Delta t}$$

Example: $0 \rightarrow 60 \frac{\text{mi}}{\text{hr}}^{\text{EAST}}$ in 10 sec

$$a = \frac{\Delta v}{\Delta t} = \frac{60 \frac{\text{mi}}{\text{hr}} - 0 \frac{\text{mi}}{\text{hr}}}{10 \text{ sec}} = 6 \frac{\text{mi}}{\text{hr} \cdot \text{s}}$$

Controls in your car:

GAS PEDAL \leftarrow SPEED UP

BRAKES \leftarrow SLOWS DOWN

STEERING WHEEL \leftarrow CHANGING DIRECTION

Oct 4-7:27 AM

Try the worksheet

Questions are in pairs -- comparing how \$\$\$ changes to how **speed** changes

ON EARTH GRAVITY ADDS 10m/s every sec.
 $10 \text{ m/s/s} = 10 \text{ m/s}^2$

Oct 5-8:37 AM

Daily 3 Questions

- * Every day except test/project days
- * 3 Questions on the topics of the day
- * Main source of daily points
- * I am happy to give credit when I have no concerns about someone giving or getting help with the answers.

You can't get your points if you don't have your **NAME!!!**

Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

1. What is one control in your car that will affect the car's acceleration?

*GAS, BRAKES, STEERING WHEEL
PEDAL*

2. Washers that get more spread out (2nd string) make sound that

- A. gets more spread out
- ☒ B. is evenly spaced
- C. gets closer together

3. Acceleration is change in VELOCITY over change in TIME.

Oct 8-6:48 AM